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(19) **United States**(12) **Patent Application Publication** (10) **Pub. No.: US 2002/0149570 A1**
Knowles et al. (43) **Pub. Date: Oct. 17, 2002**(54) **ACOUSTIC WAVE TOUCH ACTUATED
SWITCH WITH FEEDBACK****Publication Classification**(76) Inventors: **Terence J. Knowles**, Barrington, IL
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TX (US)(51) **Int. Cl.⁷** **G09G 5/00**
(52) **U.S. Cl.** **345/173**Correspondence Address:
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500 W. Madison Street
Chicago, IL 60661 (US)(57) **ABSTRACT**

An acoustic wave switch includes a substrate with an acoustic wave cavity formed therein such that the mass per unit area of the acoustic cavity is greater than the mass per unit area of the substrate adjacent the cavity. A transducer is mounted on the acoustic cavity for generating an acoustic wave that is substantially trapped in the cavity. A touch on the touch surface of the acoustic wave cavity absorbs acoustic wave energy and produces a detectable change in the impedance of the transducer. Various feedback mechanisms can be employed to provide a user with a tactile, audible and/or visual response indicating actuation of the switch by a touch.

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